REMARKS/ARGUMENTS

Claims 1-4 and 6-37 are pending in this application. Claims 17 and 18 have been amended to more clearly recite the Applicants' invention, and Claim 38 has been added. Claims 1-4 and 6-37 stand rejected under 35 U.S.C. § 103 as unpatentable over US Patent No. 6,317,727 to May ("May") in view of US Patent No. 5,857,176 to Ginsberg ("Ginsberg"), and further in view of US Patent No. 6,014,627 to Togher et al. ("Togher").

Applicants respectfully traverse this rejection and request reconsideration of claims 1-4 and 6-37 in light of the following remarks.

Rejection of Claims 1-4 and 6-37 under 35 U.S.C. § 103

The Office Action rejected claims 1-4 and 6-37 under 35 U.S.C. § 103 as being obvious over May in view of Ginsberg, and further in view of Togher. (OA ¶2).

To establish a *prima facie* case of obviousness, "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art" and the prior art references "must teach or suggest all the claim limitations." (M.P.E.P. § 706.02(j)). Applicants respectfully assert that the cited references fail to meet these standards.

Each of the claims of the present invention require that when a trade is made in a financial instrument having a tenor falling within bucket(x) (maturity band), the trade will effect the amount of available credit in bucket(x), and proportionally effect the amount of available credit in other buckets (or maturity bands). Applicants' respectfully assert that one of ordinary skill in the art would not be motivated to combine the cited references in the manner suggested by the Office Action. Further, even if combined, the combination of references do not teach or suggest this limitation.

May discloses three methods of tracking credit: the "binary" method, the "line binary" method and the "complex" method. However, the Office Action acknowledges that May does not disclose that "a trade is split over multiple maturity bands," (OA p. 3) or that maturity bands may be coupled such that credit extended in one band will effect the amount of available credit in other maturity bands.

With respect to Ginsberg, the Office Action asserts that it would have been obvious to include:

(i) "coupling of a quantity of securities in maturity bands because Ginsberg teaches that term structures require[] consideration of all instrument maturities" (citing Ginsberg col. 3, lines 1-6);

(ii) "the trade is split over multiple maturity bands because Ginsberg teaches maturities are staggered for any one [time] period" (citing Ginsberg col. 2, lines 20-30);

(iii) "spanning periods because Ginsberg teaches the need to [use] real time term structure that requires as an element spanning periods" (citing Ginsberg table 1);

(iv) "calculating the term structure of interest rates and solving the equation to define the term structure of interest rates spanning a family of fixed income financial instruments because Ginsberg teaches such as required when disparate market data is utilized in analysis" (citing Ginsberg col. 3, lines 50-55); and

(v) "determination of the net present value for all the components of instruments in the baskets and the calculation of the price, yield to maturity and duration because Ginsberg teaches such as needed to calculate an index" (citing Ginsberg col. 9, lines 45-55). (OA p.4).

Ginsberg teaches "a data processing system [that] receives a continuous stream of … data regarding market transactions of fixed income securities. The incoming data is qualified and then used to determine the term structure of interest rates…." (Ginsberg Abstract). An index value for a pre-selected portfolio of securities is then calculated. Id. Ginsberg's teachings are inapposite for several reasons.

First, there is no suggestion or motivation to combine Ginsberg's method for creating an interest rate index with either May or Togher. The Office Action cites no language in the references themselves which would suggest such combination. To the extent the Office Action relies on "the knowledge generally available to one of ordinary skill in the art," it is respectfully submitted that, one of ordinary skill in the art would certainly not look to Ginsberg when creating a system to manage credit between two counterparties.

Ginsberg's system determines index values based on the "term structure of interest rates." The "term structure of interest rates," is merely a yield curve chart that graphically depicts the yields of zero-coupon securities of the same credit quality and type. (See Exhibit A). Yield is depicted on the vertical axis and maturity on the horizontal axis. Nothing in such yield curve discloses or suggests -- or even relates to -- the coupling of maturity bands in a system for

managing credit. In fact, in the case of Treasuries, these securities are considered as being "risk-less" (see Exhibit A) or as Ginsberg expressly notes:

> One important attribute of Treasuries, in the context of the present invention, is the minimal and uniform default risk; the issuance of U.S. government paper removes the default risk as a defining criteria in the relative pricing of treasuries in the market place. (Ginsberg col. 1, lines 59-64).

Thus, Applicants respectfully suggest that one of ordinary skill in the art would not be motivated to combine Ginsberg's system of calculating the term structure for interest rates -- which relate to yield and substantially assume minimal and uniform default risks -- with any system for managing credit risks between counterparties. In fact, by emphasizing the minimal and uniform default risk of certain of such securities, Ginsberg actually teaches away from such suggestion.

Moreover, even if Ginsberg was applied to May and/or Togher, the combined references would not disclose or suggest Applicants' claimed invention.

As to the point (i) above, the Office Action asserts that it would have been obvious to include "coupling of a quantity of securities in maturity bands because Ginsberg teaches that term structures requires consideration of all instrument maturities" (citing Ginsberg col. 3, lines 1-6). First, it is not clear whether the Office Action is referring to coupling within a maturity band or across maturity bands. In either case, as noted above, the "term structures of interest rates" referenced by Ginsberg in col. 3, lines 1-6, refers to the yield curve chart. As also stated above, nothing in such yield curve discloses or suggests -- or even relates to -- the coupling of maturity bands in a system for managing credit. In fact, in the section cited by the Office Action, Ginsberg expressly distinguishes between the "term structure of interest rates" from other "investment criteria," such as tax implications" "default risk." It is "default risk" which is being managed in the present invention. Accordingly, nothing in the cited section of Ginsberg can be considered as disclosing or suggesting the claimed limitations discussed above.

As to point (ii) above, the Office Action asserts that it would have been obvious to include "the trade is split over multiple maturity bands because Ginsberg teaches maturities are staggered for any one [time] period" (citing Ginsberg col. 2, lines 20-30). The cited language states:

> In January, 1992, there was a total of approximately $1.7 trillion of U.S. notes and bonds outstanding. The majority of issues in dollar terms are short term. The profile of maturities (i.e., the expiration date of the security) indicates that $730

> billion or 43% of the total will mature over the period between 1994 and 2002 (2 to 10 years out). Another 34% will mature in 1993 and 1994 and about 3% from 2003 and 2005 and 20% maturing between 2006 to 2021. In this context, the period between 2 and 10 years out in time incorporates a concentrated portion of the entire market. (Ginsberg col. 2, lines 20-30)

Applicants acknowledge that it is well known that financial instruments may have different maturities. However, as set forth in the Applicants' Specification, the fact that financial instruments have different maturities does not address the problem addressed by the Applicants' invention -- i.e. managing credit between two parties trading financial instruments having varying maturities. There is nothing in the cited language, or in the assumption that Ginsberg teaches that "maturities are staggered for any one [time] period," to teach or suggest the claimed limitations discussed above.

Moreover, Applicants respectfully suggest that any such teachings or suggestions from the above-quoted portion of Ginsberg (i.e. Ginsberg col. 2, lines 20-30) are merely cumulative, at most, to the disclosure of May. Specifically, May already discloses that financial instruments have different maturities. Accordingly, it is not understood how (or why) the above-quoted teachings from Ginsberg could be combined with May to yield the presently claimed invention.

As to point (iii) above, the Office Action asserts that it would have been obvious to include "spanning periods because Ginsberg teaches the need to [use] real time term structure that requires as an element spanning periods" (citing Ginsberg table 1). Table 1 of Ginsberg depicts a portfolio comprising pre-selected securities having various terms, coupon percents and face values. The Ginsberg system first calculates a yield curve based on data input received from trades. (Ginsberg col. 5, lines 45-47). It then generates a hypothetical market price for the pre-selected portfolio of securities in Table 1 based on the calculated yield curve and presents this value in terms of average par value. (Ginsberg col. 5, lines 61-64). As discussed above, the concept of determining the time value of money by applying a yield curve to a pre-selected set of securities is inapposite to the problem addressed by Applicants' invention of managing credit risk between counterparties trading financial instruments.

As to points (iv) and (v) above, the Office Action asserts that it would have been obvious to include "calculating the term structure of interest rates and solving the equation to define the term structure of interest rates spanning a family of fixed income financial instruments because Ginsberg teaches such as required when disparate market data is utilized in analysis" and "determination of the net present value for all the components of instruments in the baskets and

the calculation of the price, yield to maturity and duration because Ginsberg teaches such as needed to calculate an index." Applicants' claimed invention does not "calculate the term structure of interest rates;" solve any equation to "define the term structure of interest rates;" or determine the net present value or price for any components of instruments in any baskets. Accordingly, it is respectfully submitted that any such concepts are not being applied, or relevant, to the Applicants' claims.

Moreover, the Office Action does not set forth "the proposed modifications of the applied references necessary to arrive at the claimed subject matter." (M.P.E.P. § 706.02(j)). Specifically, the Office Action does not set forth, and none of the references teach or suggest, what specific structure or methods of Ginsberg could be used to modify May in order to arrive at the claimed subject matter.

Finally, each independent claim further recites certain limitations which are not taught or suggested in the prior art or discussed in the Office Action. For example, claim 1 recites:

using [a] computer system to recalculate said proportional draw down amount for each said bucket by implementing a function expressed as

$$M_i^{\alpha + 1} = M_i^{\alpha} - (M_i^{\alpha} / M_k^{\alpha}) * X_k,$$

where M_i +1 denotes the value of the proportional draw down for bucket i after +1 trades, and X_k denotes the size of the trade for bucket k.

Claim 13 recites:

using [a] computer system to set a normalized total credit (NTC) based on said initial proportional draw down for at least one said bucket;

calculating a conversion ratio CR_i to said NTC for each said bucket (i);

recalculating NTC according to the function

$$NTC^{\alpha+1} = NTC^{\alpha} - (X_k * CR_i),$$

where $NTC^{\alpha+1}$ is the NTC value after $\alpha + 1$ trades, X_k is the size of the α + 1 trade and CR_i is the conversion ratio for bucket i; and

recalculating said proportional draw down for each said bucket according to the function

$$M_i^{\alpha+1} = NTC^{\alpha+1} * 1/ CR_i$$

where $M_i^{\alpha+1}$ denotes the value of the proportional draw down for bucket i after $\alpha + 1$ trades.

Claim 29 recites:

> assigning a relationship to said available credit limits associated with said buckets, wherein credit extended on in connection with a trade action associated with a trade amount and a financial instrument having a tenor falling within said range of tenors for one of said buckets (the k^{th} bucket) reduces said available credit in $bucket_i$ for i = 1 to N in proportion to said trade amount multiplied by said initial available credit limit associated with $bucket_i$ divided by said initial available credit limit associated with said k^{th} bucket.

Claims 30 and 33 recite:

> for each $bucket_i$ for i = 1 to N reducing said currently available credit limit in proportion to said trade amount multiplied by said initial available credit limit associated with $bucket_i$ divided by said initial available credit limit associated with said k^{th} bucket.

None of these limitations are taught or suggested by the prior art made of record, nor has the Office Action identified anything in such prior art which purports to teach or describe such steps.

Accordingly neither May, nor Ginsberg, nor Togher, alone or in combination, teach or disclose the claimed invention as recited by each of the independent claims (claims 1, 13, 29, 30 and 33). Therefore, independent claims 1, 13, 29, 30 and 33 are believed patentable over the prior art of record.

Newly added claim 38 is believed patentable, *inter alia*, for the reasons discussed above.

In view of the forgoing supporting remarks, Applicants respectfully request allowance of claims 1-4 and 6-38.

If the Examiner wishes to direct any questions concerning this application to the undersigned Applicants' representative, please call the number indicated below.

Respectfully submitted,

Skadden, Arps, Slate, Meagher & Flom LLP

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Exhibit A
Dictionary Definitions

YIELD CURVE

A yield curve is a chart that graphically depicts the yields of different maturity bonds of the same credit quality and type. Yield is depicted on the vertical axis and maturity on the horizontal axis. The yield curve is also called the "Term Structure of Interest Rates." A normal yield curve is upward sloping, with short-term rates lower than long-term rates. An inverted yield curve is downward sloping, with short-term rates higher than long-term rates. A flat yield curve occurs when short-term rates are the same as long-term rates.

Yield curves are generally normal, or upward sloping. Given the greater uncertainty investors face when investing over longer time horizons, long-term rates are generally higher than short-term rates. There are a number of different theories that try to explain the shape of the yield curve. The two major theories are the expectation theory and the market segmentation theroy. The expectation theory basically states that the yield curve is determined by investor expectations of future short-term rates. An upward sloping yield curve implies that short-term interest rates will be higher in the future. The market segmentation theory basically states that the yield curve is determined by supply and demand for different maturity securities. In other words, the market is segmented into different maturity segments.

The most common yield curve is the Treasury yield curve. The Treasury yield curve is used as a base rate because of its high liquidity and riskless nature. The interest rates that cash flows of non-Treasury securities will be discounted at will include a risk premium over the Treasury yield for that maturity. The risk premium will incorporate such factors as that issuer's percieved credit quality, the issue's expected liquidity, and taxability of income.

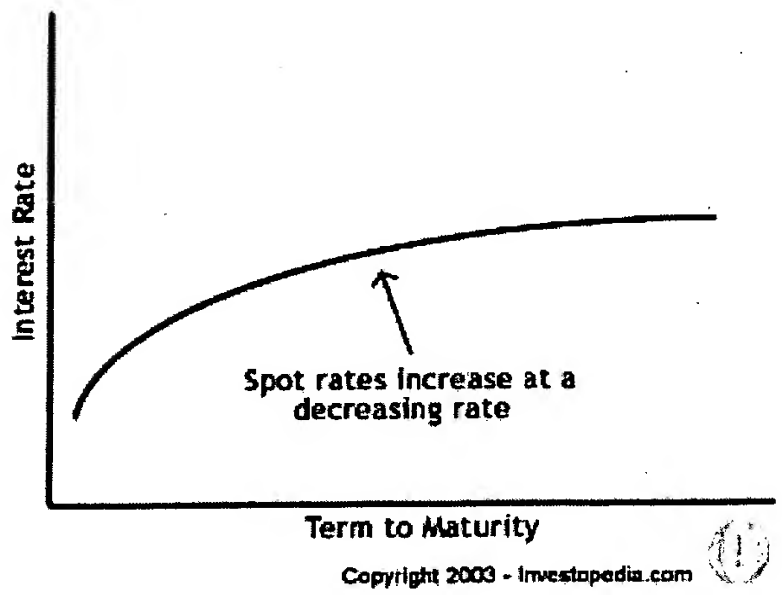
Term Structure of Interest Rates

Also found in: Wikipedia

0.01 sec.

Term Structure of Interest Rates

A yield curve displaying the relationship between spot rates of zero-coupon securities and their term to maturity.



Notes:
The resulting curve allows an interest rate pattern to be determined, which can then be used to discount cash flows appropriately. Unfortunately, most bonds carry coupons, so the term structure must be determined using the prices of these securities. Term structures are continuously changing, and though the resulting yield curve is usually normal, it can also be flat or inverted.

See also: Coupon, Discounted Cash Flow - DCF, Heath-Jarrow-Morton (HJM) Model, Interest Rate, Liquidity Preference Theory, Maturity, Spot Rate, Yield Curve

Heath-Jarrow-Morton Model - HJM Model

Liquidity Preference Theory

Financial browser

- Term insurance
- Term Life Insurance
- Term Loan
- Term Out
- Term premiums
- Term repo
- Term Sheet
- **Term Structure of Interest Rates**
- Term to Maturity
- Term trust
- Terminal Elevator
- Terminal value
- Terminal Value - TV
- Terminal Year
- Terminally Ill

Full browser

- Term of the patent
- Term of United States patent
- Term of US patent
- term of years
- term of years
- Term Out
- term paper
- term papers
- Term policy
- Term premiums
- Term program
- Term program
- Term repo
- Term Requirement in Average
- Term rewriting
- Term rewriting system
- Term rewriting system
- Term rewriting system
- term set
- term sheet
- term sheet
- Term Spontaneous Vaginal Delivery
- Term spreads
- Term spreads
- **Term Structure of Interest Rates**
- Term symbol
- Term to maturity
- Term trust
- Term(s) Of Service
- TERM-KE
- Term-limited
- Term-rewriting
- Terma
- Terma
- Terma
- TERMAC
- Termagancy
- termagant
- termagant
- termagant
- termagant
- termagants
- termagants
- Terman
- Terman Middle School
- Terman, Frederick E (mmons)
- Terman, Lewis (Madison)
- Terman, Lewis Madison
- Terman, Lewis Madison